SPRING 2020 **The Chemistry of Art** **CHEM 176**

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The Chemistry of Art is a class taught in collaboration between the Department of Chemistry at Rice University and the Museum of Fine Arts Houston (MFAH). As such, it provides a unique opportunity for students to understand and experience the role that chemistry and science in general plays in the creation, preservation, restoration and authentication of art objects.

This course is being taught in conjunction with the conservation staff at the Museum of Fine Arts Houston (MFAH). Some sessions will be held during class time at the museum, which is about a 10-15 minute walk from campus, or you may bike. Because of construction at the MFAH, parking may be difficult to find and you may have to pay for it. Students will be responsible for getting to the museum on their own, but we anticipate that the classes will start about ten minutes later (ca. 11 AM rather than at 10:50 AM) on those dates in order to give people enough time to get there. The rooms where you will meet at the museum will be indicated via email shortly before our visits. Most often, we will be meeting in the lobby of the Beck Building located at the southeast corner of Fannin and Binz. Our intention is to cover fundamental chemical principles in class, which will be followed by illustration of these principles with selected works of art at the museum.

The course grade will be based upon the following:

- Class attendance and participation (10%)
- Three 1-hr semester exams (20% each)
- Out of class assignments (10%)
- Final exam (20%)

Attendance during the lecture classes held at Rice is strongly recommended since there is no standard text available for the class. Attendance at the sessions held at the MFAH or that the Houston Museum of Natural Sciences (HMNS) are required as these cannot be made up. 2% of the course grade will be subtracted for each missed session that takes place at one of the museums, although you will be allowed one 'free pass' on missing a particular session. If you miss a museum you will be responsible for getting notes from your fellow students as this material will also be covered on the exams. The museum conservators will present the material covered at the museum. The museum staff who will be participating in this class include

Per Knutås	Chairman of Conservation
Melissa Gardner, Maite Leal	Paintings Conservators
Ingrid Seyb	Assistant Conservator of Objects and Sculpture
Steve Pine	Senior Conservator of Decorative Arts
Toshi Koseki	Senior Conservator of Photographs
Tina Tan	Conservator of Works on Paper
Corina Rogge, Ph.D.	Conservation Research Scientist

All of us involved in this project are very excited about the course, and we hope that you are too!!!

Schedule, *Subject to Change*

Week 1

January 14	Creating and Perceiving Objects of Art The Elements: Periodic Table
January 16	Bonding and Reaction types

Week 2

January 21	Introduction to the Conservation of Art at the MFAH
January 23	Metals

Week 3

January 28	Sculpture (MFAH)
January 30	Metals, Interaction of Light with Matter

Week 4

February 4	Interaction of Light with Matter, continued
Feburary 6	**Exam 1**

Week 5

February 11	Gems and Minerals
February 13	Spring Recess – no class

Week 6

February 18	Pigments: Inorganic Pigments
February 20	Organic Compounds, Functional Groups

Week 7

February 25	Organic Pigments
February 27	Paintings (MFAH)

Week 8

March 3	Polymer Chemistry
March 5	Textiles and Fabrics, Dying

Week 9

March 10	Textiles and Fabrics, Dying (cont'd), Wood
March 12	Wood
March 14 – March 22	Spring Break – No class

Week 10

March 24	Wood (MFAH)
March 26	**Exam 2**

Week 11

March 31	Paper and Inks
April 2	Case Studies (MFAH)

Week 12

April 7	Works on Paper: Prints and Drawings (MFAH)
April 9	Photography

Week 13

April 14	Photography
April 16	Photography (MFAH)

Week 14

April 21	Case Studies
April 23	**Exam 3**

Note: Dates in red type are scheduled to take place at the MFAH.

Any student with a disability requiring accommodations in this course is encouraged to contact the instructors after class or during office hours on or before January 24, 2019. Additionally, students will need to contact Disability Support Services in the Ley Student Center to provide a letter concerning what accommodations are expected.